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ABSTRACT

At the center of the conceptual framework there is visual imagery. Man's emotional and mental behavior is built on archetypal symbols that are the source of creative ideas. Native American pictography, in particular, illustrates this in the correlation between gesture speech and verbal speech. The author's research in this area has included a series of conversations with a preschool child about the imaginative formation of the concept of "a cloud." The examination of one child's creative thinking indicates that scientific thinking occurs alongside artistic thinking. The paper concludes that the understanding of the role of imagery in the creative processes, both scientific and metaphorical, will help in building the right attitudes towards the comeback of picture-language. (Contains 14 references and 9 figures.) (AEF)

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Imagery, Concept Formation And Creativity-From Past To Future

Asael Silverstein Ora. N

Abstract

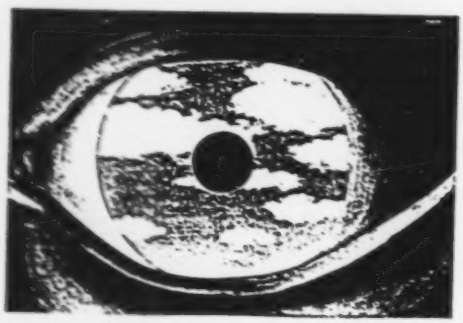
A look at the process of the imaginative formation of one concept, "a cloud", is presented here. The paper exposes the creative, artistic and scientific visual thinking of one child: Sagee Kopel, in the continuum of his fourth year. The author has been involved in an ongoing research on "picture language" focusing on the American Indian pictography. The present paper deals with this ongoing research and some of its preliminary findings are referred to as well.

Introduction

The importance of creativity for the individual and society is beyond question. The use of tools and languages enables humans to make new entities and abstract communications and to develop the arts and sciences. This makes a clear distinction between the human race and the other species on our planet. Visual Literacy and capacity are engaged with thinking and thus with new formations, in the learning process and concept formation. Paivio (1991), and Miller and Burton stated that the encoded images, alongside our verbal vocabularies act upon human cognition, information processing and the communication processes.

There is also a great amount of literature by Gregory, Arenheim, Goodman and Gombrich backing the approach that human perception is based mostly on visual capacity (Fig. 1).

Figure 1
Postcard. Magritte, An Eye



This paper intends to present a part of an ongoing research in what the author calls: picture language (1996). One of the children in the study group (1995), was privately examined during 1996. Starting when he was three years old he is on follow-up of his thinking and activities concerning one concept: the cloud. (Fig. 2)

Figure 2
Clouds Above the Sea

The theoretical background, the results and a discussion of this procedure are given hereby.

Theoretical Background

According to Ausubel, Novak & Hnesian (1968), the concepts are tools with which the outside and inside worlds of the individual are experienced while human thinking occurs. Howard wrote that every stimulation can be placed by the mind in one

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of many categories. The concept is a mental representation of a category (1987). In the process of abstraction, a given concept in our individual cognitive system conceals a personal experience, which gives the concept an idiosyncratic character (Fig. 3). The private human experience goes through processes towards selectivity, simplification, abstraction, generalization and schematization, and is not a loyal representation of the sensual absorption.

Figure 3
Clouds. Painting by A. Ofek

The writers claim that it is important to distinguish between the common concept of a culture and the personal concept of a given entity. Norman (1980) investigated the cognitive system. His experiments show that the memory impressions start with a sensational memory. Norman calls the registration of the sensual perception that accumulates in the sensual memory, an image. Thus, at the center of the conceptual framework there is the visual imagery.

According to these authors, the personal imagery is idiosyncratic, and common critical attributes are designed in every given culture by symbols. In "Man and Symbols" (1961), the last work by C.G. Jung, the author expresses his thought that imaginative thinking is the basic character of the human being. In this book he wrote that every concept in our conscious mind has its own psychic associations. Our imagination and intuition are vital to understanding and equally vital for the arts and all sciences. In the same book, and in Jung's words, M.L von Franz writes that in humans, the archetypes of the unconscious can act as creative forces. Archetypes are the patterns of emotional and mental behavior in man. They are built of archetypal symbols and are the source of creative ideas.

The notion of the perception of scientific symbols versus artistic symbols presenting the same concepts was studied by the author (1991, 1992). In another paper (1995), the author discusses the hidden power of picture language of ancient cultures.

Pictures showing symbols of different concepts in the Samarian, Egyptian, Chinese, Aztec and American Indian cultures are given in Fig. 9.

The author was impressed by the Native American Indian pictography, which shows correlation between gesture speech and verbal speech. Being a culture in which the visual was used consciously for expression and communication, it is suitable for the detection of human communication and mental operation. The author studied the American Indian picture language (Fig. 5, 6) on 10 Israeli young children (1996).

Apparently, each concept such as: earth, water, horizon, has its image for the ego.

Shoham enlightens the understanding of the human processes of creativity. He writes (1977) that the continuity of our personality lays two different system entities opposing each other. One depends upon perception of space, time and cause, and therefore its cognitive disposition is built on logos, pace and sequentiality. The second is totalitarian, out of time and synchronistic and acts by the penetration of intuition and by mystic experiences. The authentic creator projects on his creativity his ontological feeling of uniqueness. An authentic creativity bears a clear seal of the special configuration of the creator.

A. Cohen (1990), who focuses on the inter-relations of psychology and literature, writes that the child needs a tool in order to escape fears and tensions. He writes that the narratives and legends are an excellent catharsis for conflict transfer.

The research

Background

The follow-up of one child in the process of building one concept, is given here. The child is Sagee Kopel. The concept: "a cloud".

When Sagee was three years old, he told me that he wanted to live on a cloud. It bothered me and I decided to ask him more about it. The next time I saw Sagee I asked him why does he want to live on a cloud and he told me his story. I was taken by it and promised to write it down for him. When I found time I took Sagee to my study. We sat together near my computer and I wrote the story in the child's words. It was during our second conversation about the hydrological cycle, that was focusing on the concept: "a cloud", that Sagee created in his verbal language and picture writing, more of his own metaphors of the concept. I could not ignore the process of combining artistic and scientific meanings to a whole imaginative thinking, which I behold.

"A Boy Who Lives on a Cloud"

(Sagee's story, translated from Hebrew).

"The boy who lives on a cloud is me. My name is Sagee. I am three and a half years old. Together with me are my mother Yonat and father Omry. Also my brother Ofir that was born after me. I am the firstborn and Ofir is younger than me (Fig. 4)

Figure 4
Sagee and Ofir

In the cloud-house I have a ladder. Up in the sky there are birds and butterflies that I love. Down on the earth there are many animals, friends of mine that I love, and cars in the street. The rhinoceros that I ride, the elephants and tigers that I hug and also snakes, scorpions and monkeys. I do not beat them and do not kill them. The snake does not bite me. The scorpion does not pinch me. I also do not beat them and do not kill them.

We all use the ladder to go down and do not push. Father takes the blue car to work and sometimes the white car. Mother takes always the white car.

I am not afraid to live on a cloud. I love to be in a cloud house and to go down by the ladder without fear. Sometimes I hold birdflies (he made one word from birds and butterflies) and snakes and scorpions in my hands.

In my story there are no blows, "Bums Trachs" and no violence, therefore I am in a cloud."

I tried not to interfere with the story. It was only later on that I realized that it could be a good idea to have an observer.

The "scientific conversation"

Background

The entire experimental process, observation and writing were carried out by the author. Again, no external observer. The experiment took place both in the kitchen and outdoors. The kitchen opens to a loan facing west, few kilometers from the Mediterranean sea. It was taken in august 1995 when Sagee was 4 years old. I had a former conversation with him in the winter of that same year and at the same place. Sagee Told his "story" in December and I wrote it down for him around January 96. All 4 activities took place in one year. For his forth birthday I produced 10 books of his story. Each book has his own original drawings.

The second conversation

O: Ora. S: Sagee.

I looked at the sky and asked: how is the sky in the summer? S: A lot of sun, the color is blue. O: How is the sky in the winter? S: Cloudy. O: What are clouds, do you

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Figure 5
The Picture Language of the American Indians (a test tool)

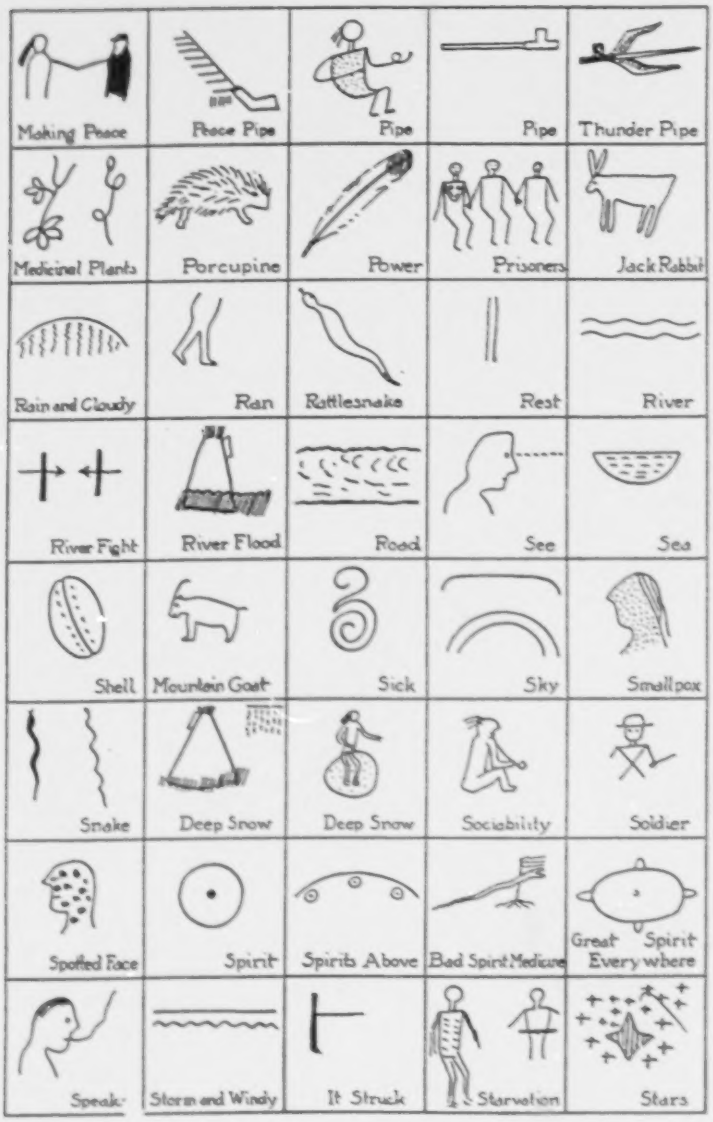


Figure 6
"The Weather" (a test tool)

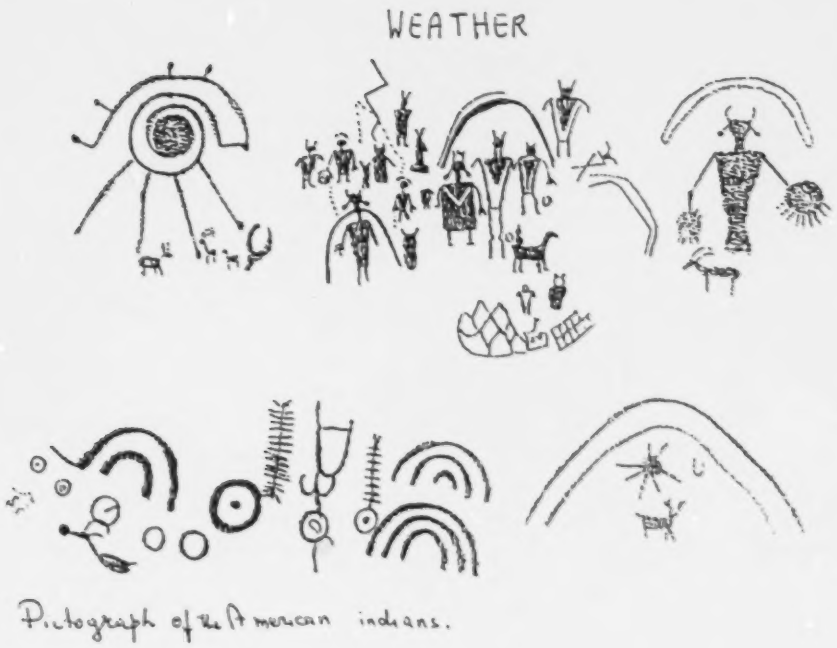
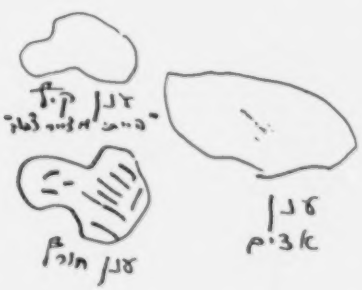


Figure 7
Ofir's Drawing of a Cloud

Figure 8
Sagee's Drawing of a Cloud



Discussion

There are many symbols common to all human beings (Fig. 9). Many concepts that are used to make the natural forces comprehensible and are called "scientific concepts" are meaningful and powerful in nature. The sky, earth, sea and the celestial bodies are only few examples of natural entities that became archetypal symbols after being gods and the source for myth and legend. The paper shows a small part of the process of a concept formation.

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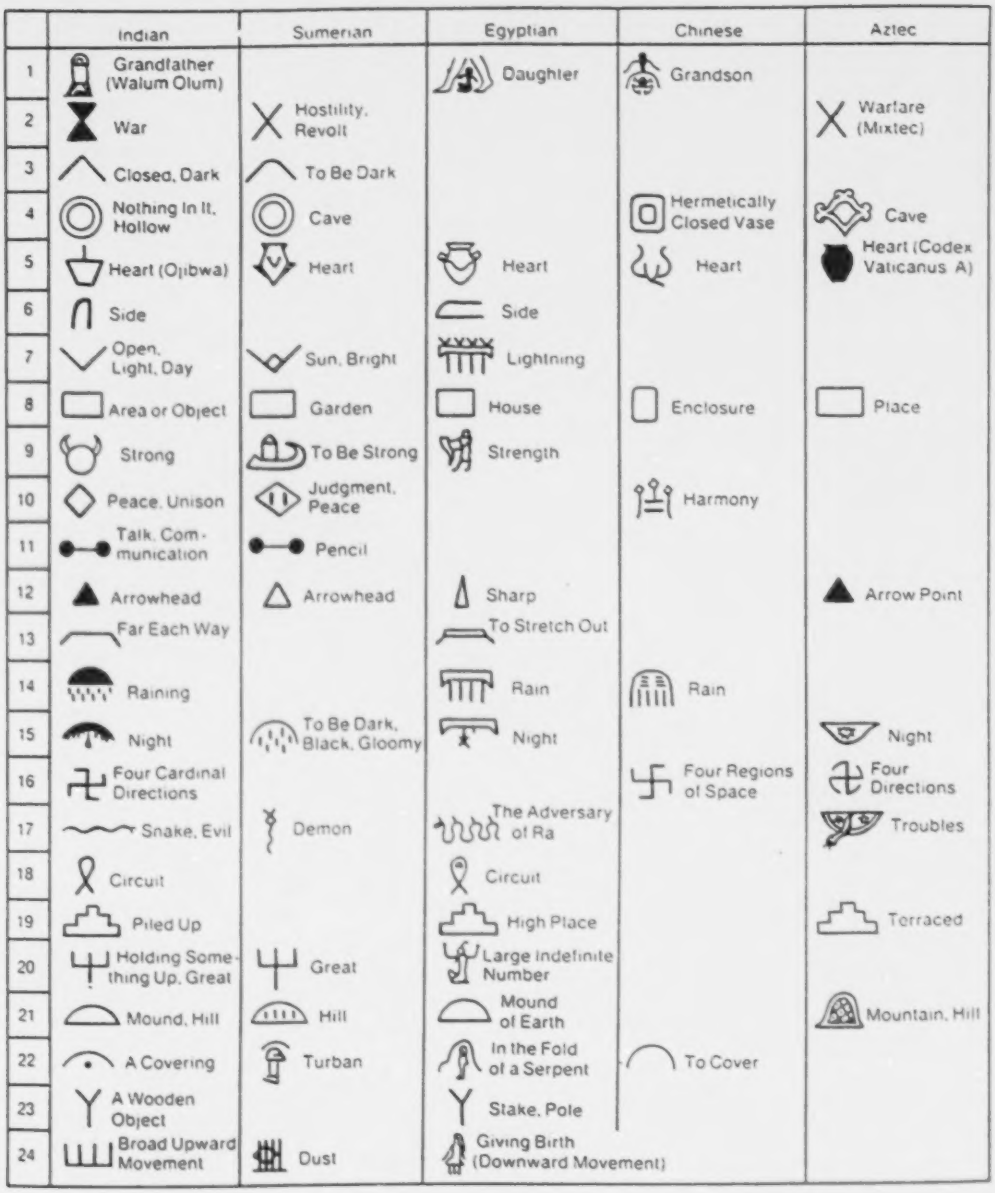
Figure 9
Picture Language in Different Cultures



The follow-up of Sagee in his creative thinking of "a cloud" gives a strong endorsement to the literature cited in this paper. It indicates that scientific thinking occurs alongside artistic thinking. It makes clear that a child is a very creative human being. It shows that the child build his own metaphors to deal with his conflicts, and at the same time his individual frameworks of the real are formed. The results given here show an idiosyncratic formation of a concept.

Recommendations

The recommendations embodied in the paper are for the purpose of building positive attitudes to modern communication tools in which the imagery components further form, as in the past, an integral part of the learning and interpersonal communication processes.

N. Postman (1982) writes that childhood is a social artifact, and claims that it has come to its end in America. He blames the media for the intensity of the aggression and hyper sexuality in the American society, wishing that the computer would provide the wishful remedy. Israel is also entirely under the influence of the twentieth century technology. The development of media technologies has been perceived as threatening phenomenon by many individuals and various groups. In Israel, most of the writers and poets opposed the new development of media communications. It is most important for all sectors to understand that the new tools are most capable, and are supposed to allow for creativity through new channels, with higher levels of context and intelligence than in the past. Sagee and his friends watch TV and video cassettes. They play computer games. The study group has access to "educational materials", but Sagee's parents are not angels. Omry, Sagee's father, is watching television daily after coming home, for several hours. They live in a small apartment, and naturally, he is exposed to a variety of programs. He has, like every individual, his own priorities.

The author believes that the understanding of the role of imagery in the creativity processes, both scientific and metaphorical, will help in building the right attitudes towards the comeback of picture-language.

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